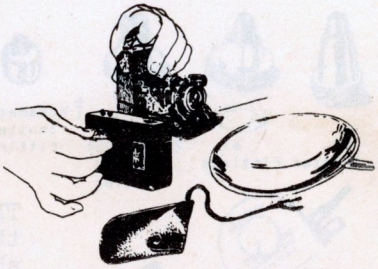
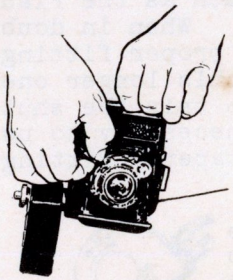
KALART Micromatic SPEED FLASH

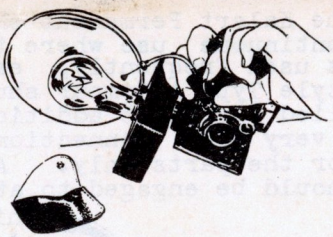
All cameras fitted with a between-lens shutter of the set and release type such as the Compur can be successfully operated in synchronism with a photoflash bulb by means of the Kalart Speed Flash.



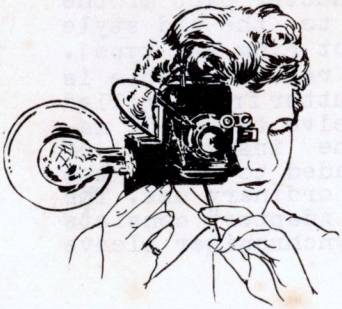
To mount, simply attach the battery case by means of the large adjustable screw to the tripod bushing in the camera. The battery case may be used either in a horizontal or vertical position, whichever is more convenient to operate the film winding key, view finder, etc.



The proper shutter fitting is then selected, depending upon the size and make of camera and shutter. The accompanying chart should be referred to to determine the size required and that fitting should be attached permanently to the synchronizer for use with this particular shutter. The synchronizer is then wound up and screwed into the cable release socket on the shutter. The cable release itself screws into the opening at the top of the synchronizer, and the synchronizer is then connected to the battery case. The reflector is slid into the bracket, and a flash bulb inserted into the socket.



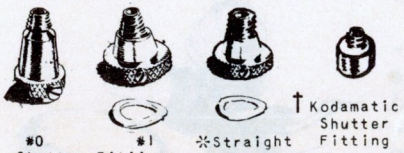
The camera and Speed Flash are now one unit and can be held in one hand by the bakelite battery case, leaving the other hand free to make the exposure through the cable release.



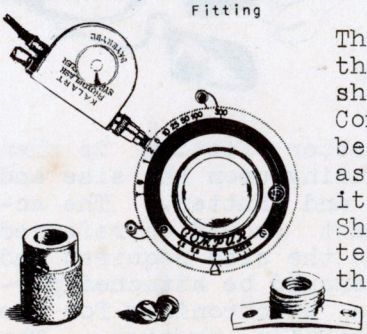
After the exposure, reset the synchronizer by winding the large knob, cock the shutter, replace the flash bulb, change the film, and you are ready for the next shot. When the synchronizer is wound up, the shutter may be opened for focussing, or ordinary exposures may be made with the finger release without operating the synchronizer or flashing the bulb.

The Kalart Speed Flash is normally supplied with two tapered fittings marked #0 and #I for Compur shutters, one short straight threaded * fitting for the Argus camera, Ilex Acme, and Optimo shutters, and one nipple for the Kodamatic shutter †.

The Compur Shutter is made in four sizes as listed below. The #I fitting should be used with shutters I and II, with the Zeiss Contax Model I, and with the large size Compound shutters having maximum speeds of 1/75th and 1/100th second. The #0 fitting should be used with the Compur Rapid shutter.

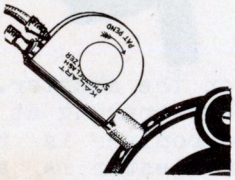


Size	Largest Stop Opening mm	Diameters of Shutters mm	Number of Sectors	Maximum Speed
Compur 00	17	44	3	1/300
Compur 0	23	57	3	1/250
Compur I	29	68	3	1/200
Compur II	36	81	4	1/200

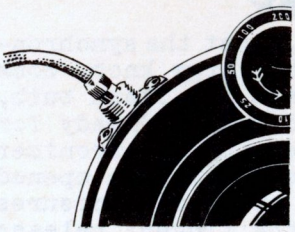


This shows fitting #0 attached to the #0 Compur shutter. This fitting should also be used with built in Compur shutters, such as the Plaubel Makina camera. When in doubt as to which is the proper fitting, it is best to try this longer one. Should this fail to trip the shutter, it will be necessary to use the #I or shorter tapered fitting.

For Kodamatic shutters, insert the nipple into the cable release opening of the shutter. This nipple should be made tight and left permanently in the shutter. Then the #0 (long) tapered fitting should be used with the synchronizer for attachment to this shutter.



The Kalart Permanent shutter adapter is recommended for continuous use where the Kalart Micromatic Speed Flash is used frequently, especially when used with the old style Type A Compur shutter. This attachment is supplied for $1.25 additional and as shown herewith offers a very firm connection to the shutter. This price is for the parts only. A competent shutter repair man should be engaged to attach these parts to the shutter.



This shows the shutter part of the adapter attached to the old style Compur shutter (not ring set type). The regular cable release nipple is removed and the shutter frame drilled and tapped to receive two #1-72 machine screws. The inside wall of this part is threaded to take the cable release for ordinary use. The "Kalart Permanent Adapter" consists of shutter part, screws for same, synchronizer sleeve with set screw and friction washer

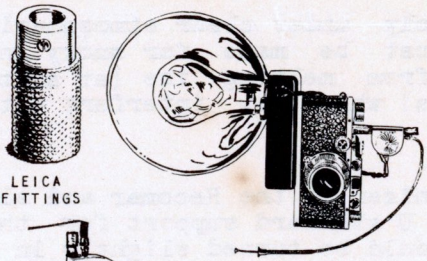
To operate miniature focal plane shuttered cameras such as the Contax or Leica with the Kalart Speed Flash it may be necessary to further increase the spring tension behind the plunger of the Synchronizer in order to trip the shutter.

Instructions for changing the spring to increase the tension behind the plunger and thereby advance the electrical contact to the lamp is contained in the directions accompanying the special Contax and Leica adapters. These adapters sell for seventy-five cents each. Specify for the Micromatic Speed Flash.

The new wire filled Superflash type of flashbulb has a burning characteristic which more closely matches in duration the length of time that the curtain takes in its travel across the focal plane of the film. This results in a uniformly exposed negative regardless of the shutter speed which may be from 1/50th to 1/1250th of a second.

Also this new type of bulb draws less current to ignite than the foil filled lamps which permits the use of more than one lamp to be fired in synchronism with the shutter. Two of these lamps may be strung out on electric extension cords and very artistic lighting effects can be obtained thereby. The cords should be no lighter than a #18 gauge with a maximum total length of about sixty feet. All electrical connections must be secure in order to avoid failure.

The following exposure scale is recommended only for use with the focal plane shuttered cameras of the Contax and Leica and should not be confused with the exposure scale recommended for between-lens shutters of the Compur type.



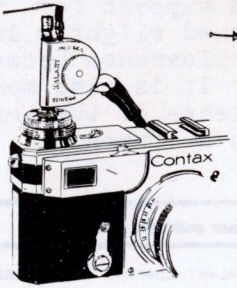
LEICA FITTINGS

1/500th to 1/1250th second

10 feet	f 5.6
15 feet	f 4.5
20 feet	f 3.5
25 feet	f 2.8

1/50th to 1/250th second

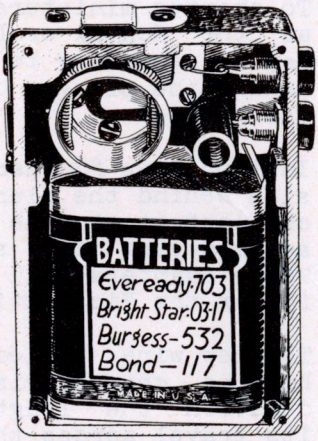
10 feet	f 8
15 feet	f 5.6
20 feet	f 4.5
25 feet	f 3.5



This shows Kalart Synchronizer attached to Contax II by means of the special Contax II Adapter.

This adapter may be used with the new chrome Contax II and III and also with the Super Nettel.

The battery case is of genuine bakelite with bakelite cover. Only one flat flashlight battery of 4½ volts, fitted with spring terminals is necessary. This is a type made in the United States by all battery manufacturers and four of these are listed in the drawing.



Being mechanical in action the Kalart Micromatic Speed Flash does not depend upon the condition of the batteries to operate the shutter. THE BATTERIES THEREFORE WILL LAST AT LEAST FOUR MONTHS WITHOUT REPLACEMENT.

Speed Flash Exposure Scale

WITH ONE FLASH BULB

FOR EXPOSURES ON VERICHROME TYPE FILM

DISTANCE LAMP TO SUBJECT	LENS STOP TO USE	
	Standard No. 20 (25c. list) 1/100 or 1/200 Sec.	Baby Size No. 10 (15c. list) 1/100 Sec.
6 feet	f 16	f 11
10 feet	f 11	f 8
15 feet	f 8	f 6.3
20 feet	f 6.3	f 4.5
25 feet	f 4.5	f 3.5

One Stop Smaller May Be Used for Exposures on S. S. Pan or Similar Extra Fast Film

Results obtained with a Kalart Speed Flash are more consistent than with daylight exposures. The light source is ALWAYS the same. The time of day and weather can always be disregarded. For subjects fifteen feet from the camera, 1/100th or 1/200th second exposure may be made at f 8. The following scale is useful in gauging lens stops in relation to distance of subject from the flash bulb. This chart applies to between the lens shutters only.

The scale may be followed only under clear atmospheric conditions. Allowances must be made for smoky interiors, fog or vapor from melting ice (at skating rinks and hockey games) which may interfere with clear visibility.

To mount the Kalart Synchronizer to the Recomar and all other cameras and have a U standard support for the lens board, the shutter should be turned slightly in a clockwise direction in order to allow clearance between the synchronizer and the U standard. It is also sometimes necessary to bend the finger release of the shutter outward after the shutter has been so turned.

Made in U. S. A. Patents 1997315, 1996592. Other patents pending.

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